

September 27, 2007

"The TPB will develop a regional transit plan including a comprehensive financial plan"



Set the Stage







- Task I Regional Fare Policy
- Task II Regional Transit System Planning
- Task III Regional Transit Marketing
- Task IV Service & Financial Measures
- Task V Service & Operations Coordination Evaluation
- Task VI Regional Transit Information System





- Agreement on concept for regional transit network
- Policy guidance on funding
- Policy guidance on governance







- Filling in the Framework System
 - What the heck is HRT, BRT, LRT, CRT & RRT?
 - How would it work in our region?
 - What would a regional transit system look like?
 - Discussion of system concepts
- Funding
- Governance



Ground Rules



- Respect this as Board work session.
- Present new ideas concisely.
- Allow others to speak.
- Speak one-at-a-time.
- Speak for yourself.
- Take the big-picture, regional view.
- Phrase things in the positive.
- Seek consensus.
- Invest in the process.



Work Session Comments



Work Session Comments



- Complete network with links to new corridors
- Phase corridors to address urgent needs now

Travel Demand

- Know and be able to accommodate for change
- Ensure developments reinforce transit investment

Priorities

- Customer service
- Activity Center work trips
- System wide mobility choice

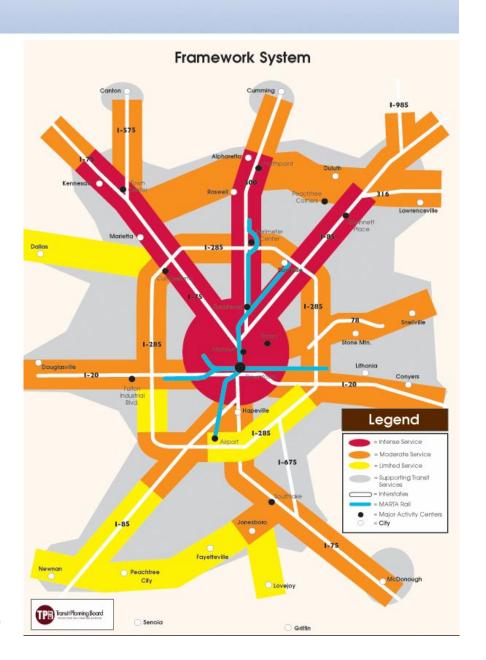
Additional Information & Process

- More detailed look at the numbers
- More detailed trip data
- Funding options



Framework System

- Confirms regional corridors
- Identifies service level intensity
- Identifies system connections
- Becomes the foundation for Regional Transit System Plan





What the heck is HRT, BRT, LRT, CRT, and RRT?

Transit Mode Options and Implications



Express Bus





Express bus is suburban bus usually has front doors only, high-backed seats, and luggage compartments. Normally used in longer-distance service with relatively few stops.

SERVICE:

- 85 persons per vehicle
- 128-1,020 persons per hour

- \$222,000-\$398,000 per vehicle
- \$5.00 \$10.00 per revenue mile to operate

Bus Rapid Transit (BRT): Arterial & Exclusive Guideway



BRT is a type of limited-stop service that relies on technology to help speed up the service. BRT operates in shared or exclusive right-of-way. This service usually has dedicated stations, pre-boarding fare payment, and is separated from normal traffic.

SERVICE:

- 40-80 persons per vehicle (one bus)
- 120-4,800 persons per hour

- \$354,000-\$584,000 per vehicle
- \$23-\$660 million per mile to construct
- \$3.40-\$15 per revenue mile to operate

Commuter Rail / Regional Rail



Commuter rail (also called regional rail) is an electric or diesel propelled railway for urban passenger train service consisting of local short distance travel operating between a central city and adjacent suburbs.

SERVICE:

- •100-130 persons per vehicle (one rail car)
- •400-5,200 persons per hour

- •\$2,138,000-\$2,333,000 per vehicle
- •\$1.24-\$24.72 Million per mile to construct
- •\$9.75-\$35.00 per revenue mile to operate

Light Rail



Light rail is a lightweight passenger rail cars operating singly or in short trains on fixed rails in exclusive right-of-way that is occasionally not separated from other traffic.

SERVICE:

- 170 persons per vehicle (one rail car)
- 680-20,400 persons per hour

- \$2,300,000-\$4,250,000 per vehicle
- \$7.3-\$585 million per mile to construct
- \$5.50 \$35.05 per revenue mile to operate

Heavy Rail







Heavy rail is an electric railway characterized by high speeds, rapid acceleration of passenger rail cars, high platform loading, and grade separated rights-of-way from which all other vehicular and foot traffic are excluded.

SERVICE:

- 170-300 persons per vehicle (one rail car)
- 1,360-96,000 persons per hour

- \$1,234,000-\$1,431,000 per vehicle
- \$85-\$180 million per mile to construct
- \$5.50-\$14.50 per revenue mile to operate

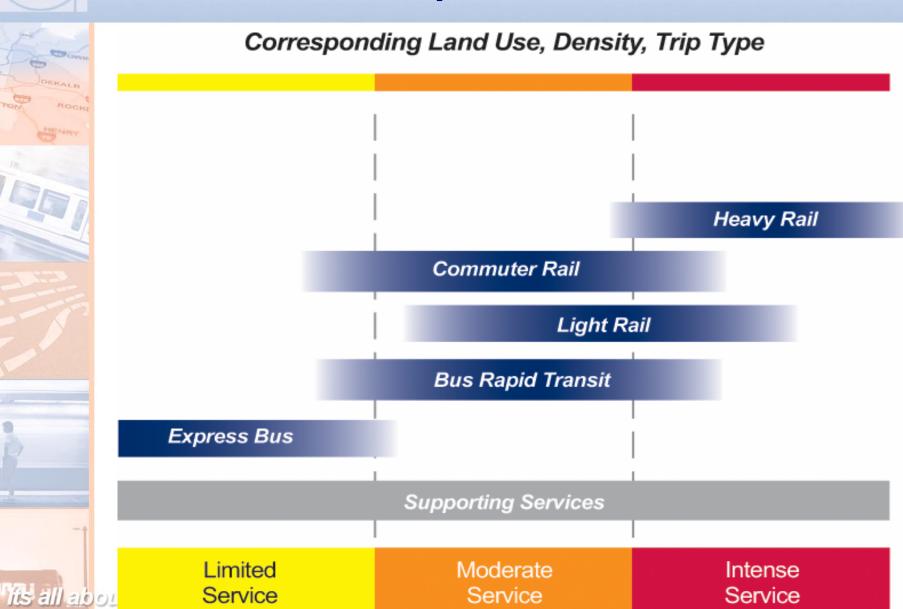


How would it work in our region?

Fitting the modes to the Framework System



Transit Service Levels: Implications for Transit Modes

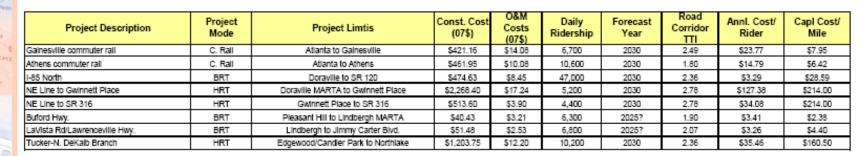


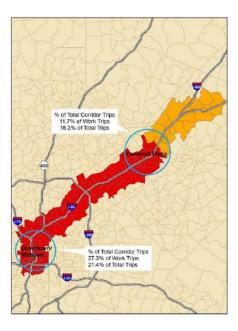
Modal Trade-Offs

Modal Characteristic	HRT/LRT/ Regional Rail	BRT/Express Bus/ Arterial Rapid Bus	
Passenger Capacity	Very high per train trip; easy to increase capacity	Low per bus trip; hard to increase capacity	
Capital Costs	Very high	Low – although can be high for BRT, depending on amount of exclusive ROW.	
Operating Costs	Low on a passenger-mile basis – can carry large #'s for each service hour	High – requires multiple vehicles to carry equivalent to rail	
Travel Times	Consistent because of dedicated ROW	Can vary with traffic conditions because of mixed traffic op's.	
Implementation Time Period	Takes numerous years to implement	Can be implemented in a relatively short time period.	
Sense of "Permanency"	Yes	Somewhat for BRT, not for bus	
Land Use Redevelopment Opportunities	Yes	Somewhat for BRT, not for bus	



Modal Application Example **I-85 Corridor**

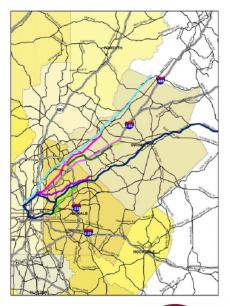




I-85 North Corridor

I-85 North	Corridor Transit Needs Assessment		
Segment	Trip Category	Trips > 5 Miles	Trips/ Square Mile
Atlanta to SR 316	work trips	47,000	550
	total trips	202,000	2,350
SR 316 to SR 20	work trips	19,500	400
	total trips	80,000	1,700
Corridor Total	work trips	66,500	500
	total trips	282,000	2,100





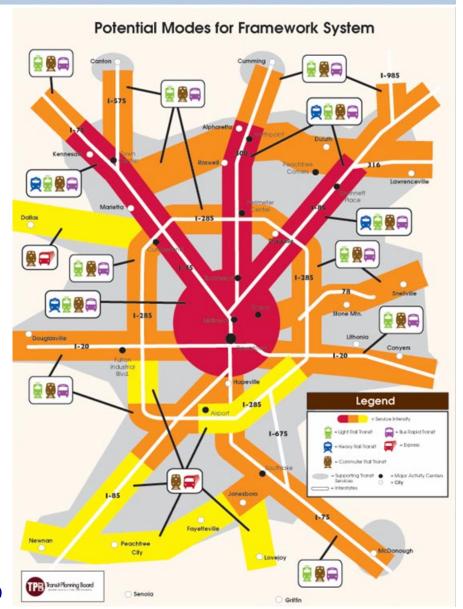
Northeast- Urban Core to Gainesville/Lawrenceville Corridor Projects





Fitting Modes to the Framework System

- Mode(s) that fit corridor ridership, land use and other characteristics
- Mode(s) that fit a regional system





TPB System Characteristics

- Activity Center Focus
- Regional Mobility & Mitigate Congestion
- Cost Effective & Meets Cost / Benefit Requirements
- Customer Focus
- Land Use Synergy

Governor Perdue's Essence of Transportation

- Mobility
- Safe & Secure
- Reliability
- Efficiency
- Stewardship of Resources



Discussion

- Is it clear which modes are appropriate for each corridors?
- Aside from capacity, what mode best fits your vision of land use synergy?
- Do you agree with a multi-modal transit approach versus one mode fits all?





What Would a Regional Transit System Look Like?

System Concept Definition

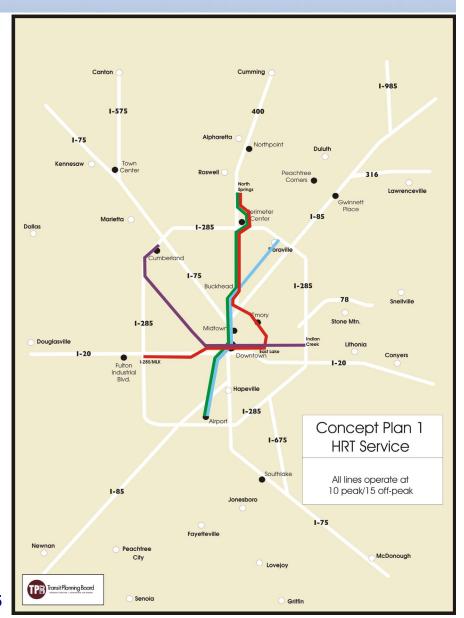


System Concept 1



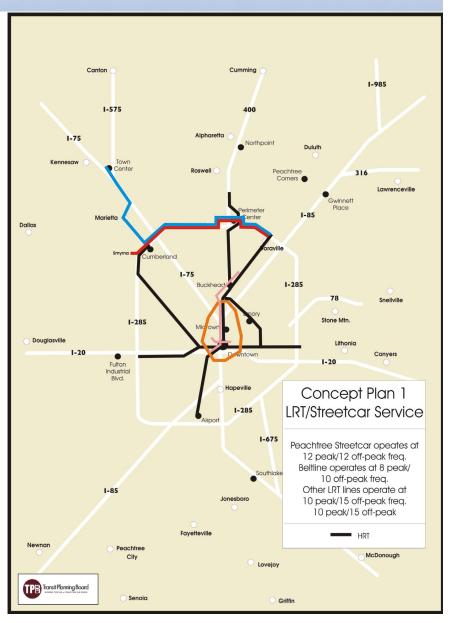


- Lindbergh to East Lake:
 North Springs MLK / I 285 via Emory
- Cumberland to Indian Creek: Direct Cumberland / Downtown or through Emory
- Complete original referendum West Line



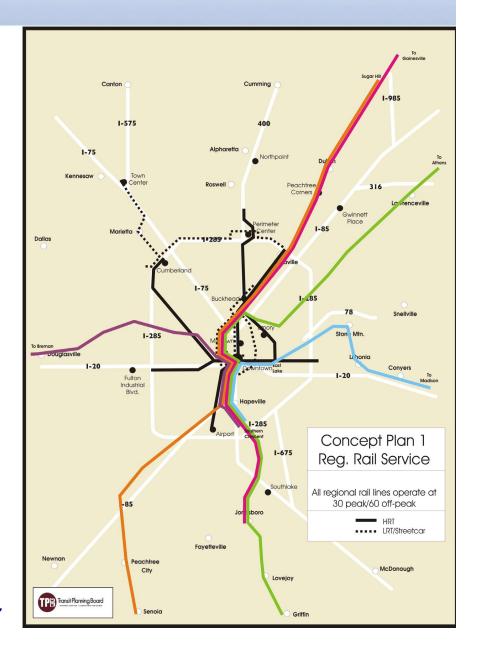


- Busbee / Doraville
 - Provides for local and express trips between Cumberland and Busbee
 - East-west through Perimeter
 - Smyrna reinforces LCI
- Beltline / Streetcar
 - Provides intra-core circulation



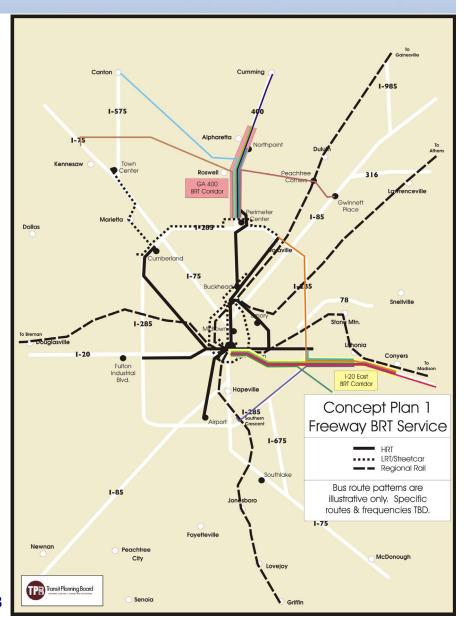


- Direct service to Airport on all lines
- 15-minute peak through northern Gwinnett and Clayton / Spalding
- Provides through northsouth movements for a regional system



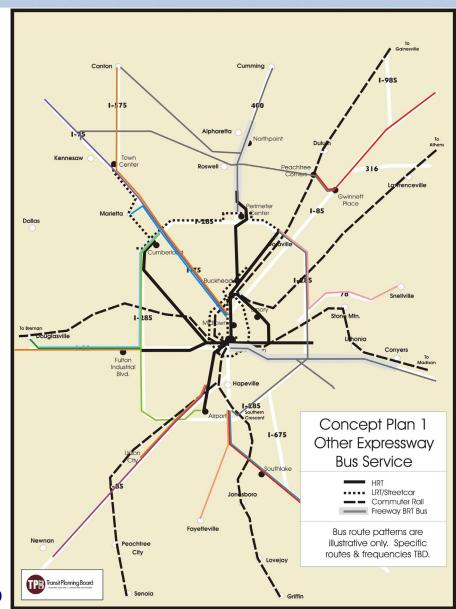


- Exclusive busways on GA 400 and I-20
- GA 400 busway serves as trunk line with branches
 - Busbee
 - Peachtree Corners
 - Canton
 - Marietta



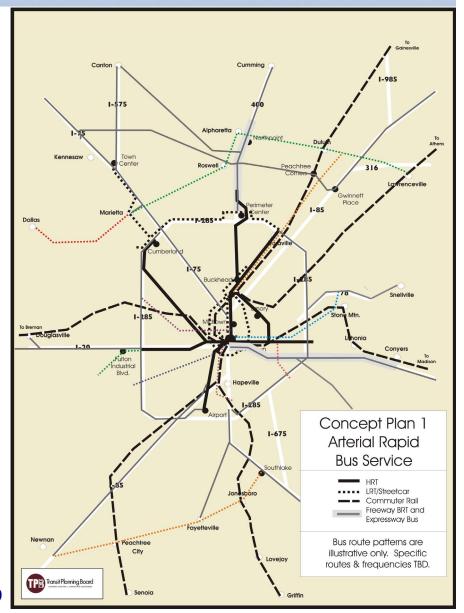
System 1 – Express Bus

 Express buses serve corridors not served by regional rail



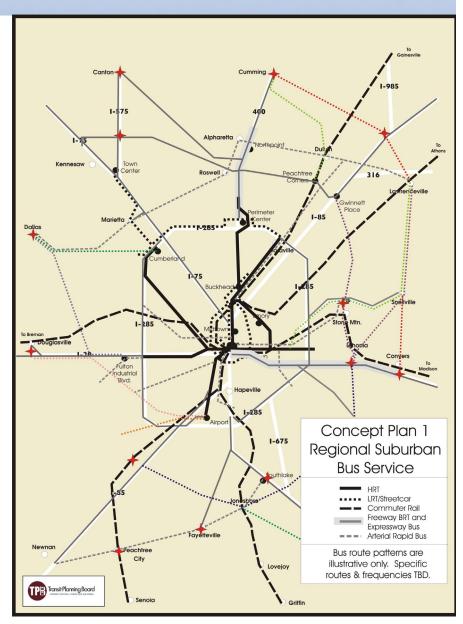
System 1 – Arterial Rapid Bus

- Provides local / limited trips in major arterial corridors
- Investment scaled to demand where higher levels of investment not warranted





- Provides suburb-tosuburb transit connections
- Links hospitals, government center, and attractions not served by other investments
- Allows access for growing elderly and tourism markets







- Direct North Springs / GA 400 access to Emory
- Allows future routings to respond to new travel patterns
- Regional Rail
 - Through North-South routing
 - Direct access to Airport from Gainesville, Athens,
 Bremen, and points in between
- Regional Bus
 - Serves outer areas with appropriate service



System 1 - Challenges



 Negotiations with railroads – access, investments to preserve freight capacity, insurance

Emory HRT

 Previous neighborhood opposition to all transit investments (Lindbergh / South DeKalb 1999 study)

Freeway BRT

 Minimizing impact of GA 400 corridor buses in the Perimeter area

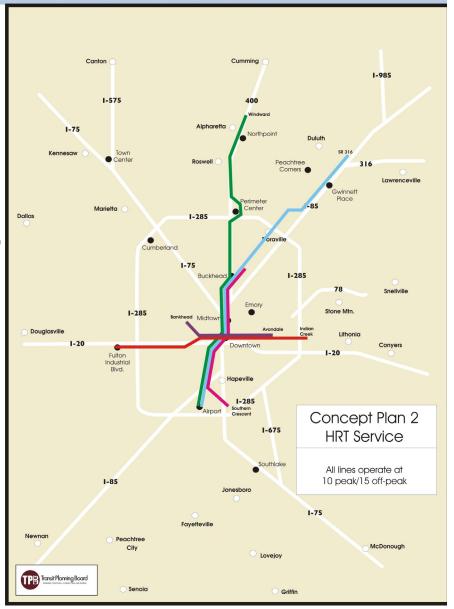


System Concept 2



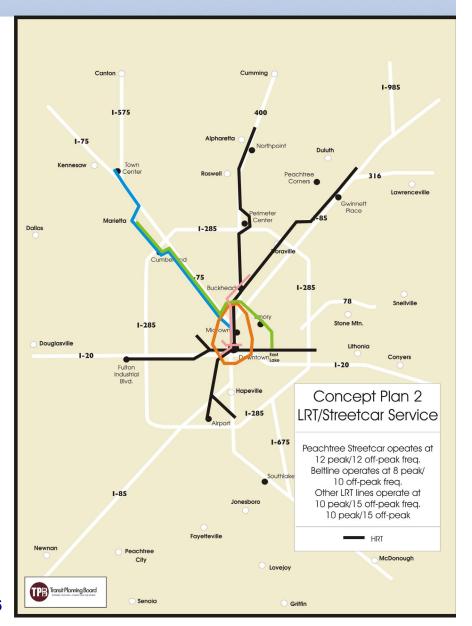
System 2 – Heavy Rail Network

- North line extended from North Springs to Windward
- Northeast line extended from Doraville to SR 316
- Branch from East Point to Southern Crescent Transportation Center
- West line extended to Fulton Industrial Blvd
- Maintains and extends existing spines



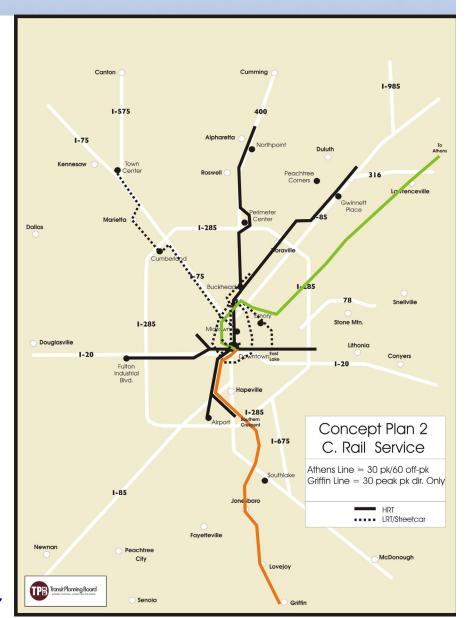


- Busbee / Arts Center
 - Cobb Parkway / I-75 trunk line
- Beltline / Streetcar
 - Provides intra-core circulation
- Marietta Decatur
 - Lindbergh to Emory link directly ties into northwest trunk via Beltline



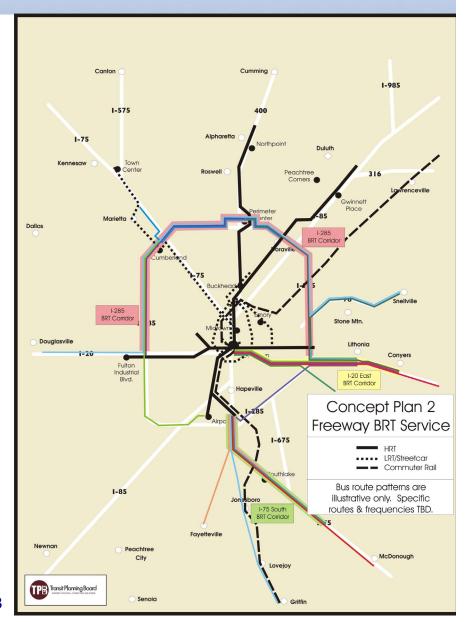


- Peak hour trains between Griffin and Downtown
- All day service between Athens and Downtown
- More traditional commuter rail system



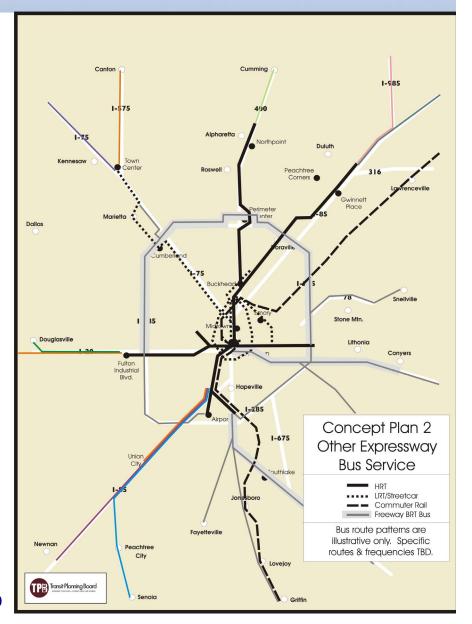


- I-285 and I-20 exclusive busways
- I-285 functions as eastwest connection
- I-75 S, I-285 east and west sides function as shared HOV



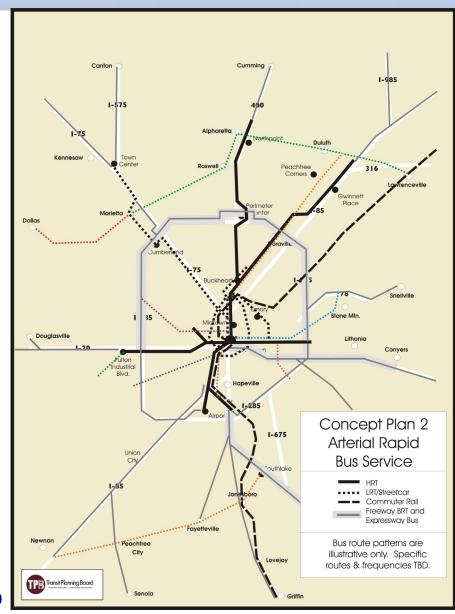
System 2 – Express Bus

 Express buses serve corridors not served by commuter rail or HRT extensions



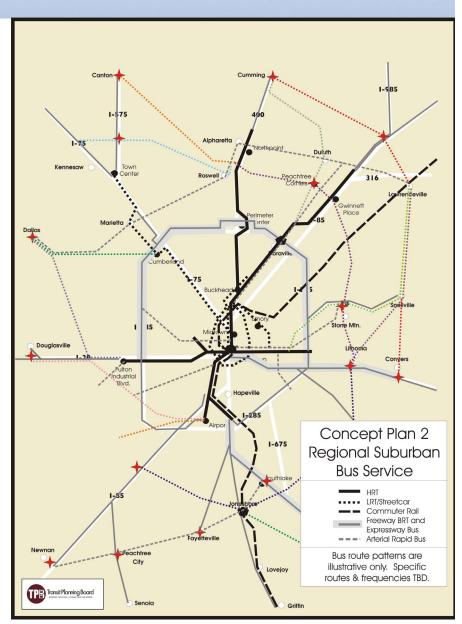
System 2 – Arterial Rapid Bus

- Provides local and limited trips in major arterial corridors
- Investment scaled to demand where higher levels of investment not warranted



System 2 – Regional Suburban Bus

- Provides suburb-tosuburb transit connections
- Links hospitals, government center, and attractions not served by other investments
- Allows access for growing elderly and tourism markets







- Links Beltline into regional system
- Provides direct access to Emory from Cobb
- HRT System
 - Leverages existing regional investment in HRT through extensions
- Regional Bus
 - Serves outer areas with appropriate service



System 2 - Challenges



- High cost to extend HRT
- Emory LRT
 - Previous neighborhood opposition to all transit investments (Lindbergh / South DeKalb 1999 study)
- Freeway BRT
 - ROW impacts associated with I-285 BRT.
 - Minimizing impact of I-285 corridor buses in the Perimeter area



Discussion

- Initial reaction
- Aside from capacity, what mode best fits your vision of land use synergy?
- Any disagreement with the mode to corridor application?
- Any items important to you that were not presented?
- Any general questions regarding the concepts presented?





Speaker:
Tom Bell
Cousins Properties

"Making the Business Case for Regional Transit: Ensuring Mobility"

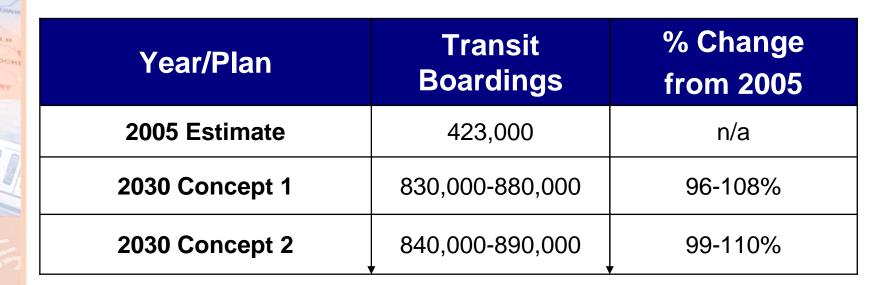


What Would a Regional Transit System Look Like?

Performance & Cost Characteristics







- Both concept plans reflect a doubling in transit boardings
- Rail ridership represent approximately ½ of concept plan ridership



Ridership Characteristics: Regional Transit Mode Shares

Year/Plan	Home-to-Work
2005 Estimate	3.8%
2030 Envision 6	3.9%
2030 Concept Plans 1 & 2	4.3 to 4.7%

- Envision 6 transit projects maintain home-to-work mode share.
- Both Concept Plans expand transit capture of hometo-work trips.



Ridership Characteristics: Activity Center Transit Mode Shares

For Work Trips

Downtown Atlanta	30 to 31%
Midtown Atlanta	20 to 21%
Buckhead	16 to 17%
Emory	14 to 15%
Perimeter Center	11 to 13%
Cumberland/Galleria	6 to 7%
Airport area	6 to 7%



Travel Time Comparison

Regional transit travel times are better than congested auto times for all these markets, AND are competitive to the auto for many other suburban activity center markets.

Travel Times To Downtown Atlanta (in minutes)

Mode	Congested Auto	Transit
Alpharetta	66	56-62
Conyers	70	67
Dallas	93	84-86
Douglasville	60	43-45
Fairburn	57	52
Griffin	95	78
Lawrenceville	80	47-49



Potential Costs: Order-of-Magnitude Capital Costs

(Billions – in 2007 dollars)

Mode	Concept 1	Concept 2
Heavy Rail	\$3.8	\$6.7
LRT/Streetcar	\$3.6	\$3.6
Commuter Rail/ Regional Rail	\$7.9	\$2.0
Freeway BRT	\$1.4	\$3.1
Arterial Rapid Bus	\$0.7	\$0.7
Support Fleet & Facilities	\$0.4	\$0.4
Total Cost	\$17.8	\$16.5



Potential Costs: Order-of-Magnitude Annual O&M Costs

(Millions – in 2007 dollars)

Mode	Concept 1	Concept 2
Existing (2007) O&M	\$367	\$367
Heavy Rail	\$48	\$83
LRT/Streetcar	\$70	\$73
Commuter Rail/ Regional Rail	\$158	\$46
Local, Express and BRT Bus	\$378	\$378
Annual O&M Cost	\$1,021	\$947
Net Increase Over Existing	\$654	\$580



Discussion

- Which concept or parts thereof appeal to you most?
- Do the concepts presented fit your vision of the regional transit system, if no, then what is missing?
- Which concept (or individual corridor) best fits your vision of land use synergy? Which do not?
- Any items important to you that were not presented?



Discuss Regional Transit System Concepts



Funding







- Existing and new system capital and operating costs
- Farebox recovery and assumptions
- Farebox recovery to cost gap
- Discussion



Current Transit Funding Sources





- MARTA tax (1% on sales in DeKalb and Fulton counties)
- Farebox revenues from all regional transit providers
- Other directly generated sources (e.g., income from investments, advertising)
- Federal, state, and local capital grants and operating subsidies
- 2006 revenues: ~\$570 million (approximately \$190 million reserved for capital investment only)

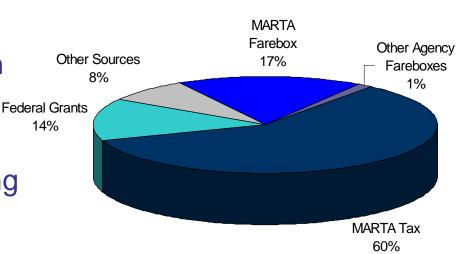
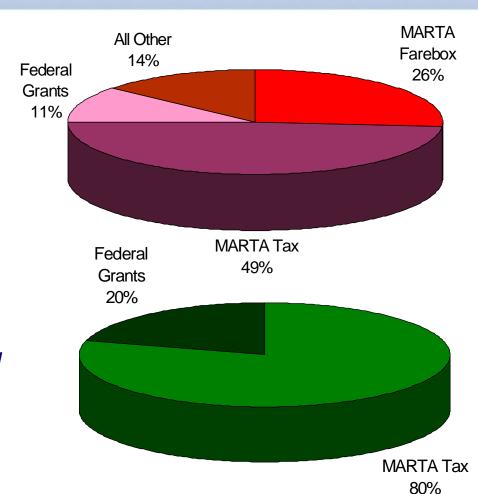


Chart based on 2006 Atlanta regional transit revenue sources as reported locally and to NTD



Atlanta regional transit revenue sources FY 2006

Sources of regional operating revenues Total \$380 million



Sources of regional capital revenues
Total \$190 million

Charts based on FY 2006 Atlanta regional transit revenue sources as reported locally





- Regional corridors capital and O & M costs exclude financing costs
- MARTA sales tax data for Fulton and DeKalb based on 2007 GSU data, projections for other counties based on annual average rate of growth (4.7%) in GSU data
- MARTA capital and operating data:
 - Beginning in FY 2010, fare increase or other funds needed to cover projected funding gap to maintain existing system (\$1.4 Billion)
 - Debt issuance and service is not included in the costs but would be needed to balance MARTA's costs (\$4.3 Billion)
 - Assumed Federal grants to assist with O & M but not capital
 - Did not include sales tax revenues from 2007 to 2030
 - No expansion projects/services included



Existing and new system capital and operating costs





- Maintain current system (routine capital and O & M)
 = \$26.0 billion
- Regional Transit Concept 1 (capital) = \$17.8 billion
- Regional Transit Concept 1 (operating) = \$11.3 billion
- Regional Transit Concept 2 (capital) = \$16.5 billion
- Regional Transit Concept 2 (operating) = \$9.99 billion
- Range of Costs to maintain current system and expand with regional concepts = \$52.5 billion to \$55.1 billion
- Annualized cost of current system and regional expansion = \$2.19 billion to \$2.30 billion



Farebox Recovery and Assumptions



Fare revenues vary among agencies, but tend to cover only about 1/3 of operating expenses

Agency	Fares as a % of operating funds
PATH	66%
WMATA	46%
MBTA	28%
Pace Suburban Bus	28%
MTA (Maryland)	27%
MARTA	25%
San Francisco Muni	24%
LA Metro	24%
Miami-Dade Transit	22%
GRTA	21%

Agency	Fares as a % of operating funds
Metro (Portland, OR)	19%
Broward County Transit	19%
Denver RTD	18%
AC Transit	17%
Metro (Houston)	16%
Riverside Transit Agency	15%
Orange County Transit	15%
UTA	14%
DART	10%
Santa Clara VTA	10%



Metro Atlanta Region 2030 Assumed fare revenue recovery

Geographic Area	Source	Annual Yield / Total Yield
2030 all metro systems	Farebox revenue based on current recovery rate of 26% of O/M revenues	\$126 Million / \$3.02 Billion



Farebox Recovery to Cost Gap





- Range of Costs to maintain current system and expand with regional concepts = \$52.5 billion to \$55.1 billion
- Current revenue sources = \$4.30 billion
- Funding Gap = \$48.2 billion to \$50.8 billion
- Annualized Funding Gap = \$2.01 billion to \$2.11 billion



Peer Region Primary Transit Revenue Sources (excludes farebox and federal funding)

- Cover	Peer Region	Sources and Yield
PTOM ROCKE	Dallas	Sales tax (1%) - \$371M ('06)
Hunny	Denver	Sales tax (1%) - \$222M ('06)
	Detroit (SMART only)	Property tax (.59 mills)
	Houston	Sales tax (1%) - \$467M ('06)
	Miami	Sales tax (0.5 %) - \$148M ('06)
	Phoenix	Sales tax (0.5 %) - \$121M ('06)
	San Francisco	Sales tax (0.75 %), Property tax (share based on formula) - \$191M + \$43M ('06)
3	Seattle (Sound Transit only)	Sales tax (0.4%), Motor Vehicle Excise Tax (0.3%), Rental Car Tax (0.8%) - \$259M + \$70M ('06)
	City of Seattle	Property tax, commercial parking tax, employee tax - \$52M ('06)
	N. VA Transportation District	Sales tax on gasoline (2%) - \$15M ('06)
its all ab	out Mobility Cholce	68



- Advertising, parking, license plate fees, rental car taxes and the like are all potential revenue sources but their yield is generally low as compared to a sales tax.
- Development rights can greatly benefit a specific project or station location, but their yield is generally low as compared to a sales tax.
- PPI's are a financing mechanism not a revenue producer - could be used for a specific project rather than as a source of regional revenue
- Focus is on the sales tax as a reasonably consistent revenue producer – used now in many urban areas for transit.



Potential Funding Sources: Annual and Total Yield (2007–2030)

Geographic Area	Source	Annual Yield / Total Yield
All metro systems	Farebox revenue based on current rates	\$126 Million / \$3.02 Billion
All 13 metro counties	1% sales tax 1/2 % sales tax 1/4 % sales tax	\$1.85 Billion / \$42.67 Billion \$930 Million / \$21.34 Billion \$470 Million / \$10.67 Billion
Statewide	1% sales tax on gasoline	\$100 Million / \$2.36 Billion



Discussion

- If a regional system, is there a State funding role?
- Which funding tools appeal to you the most? The least?
- Do you prefer funding tools that can be implemented regionally? Require state legislation? Require regional referendum?
- What would you consider to be an equitable way to raise funds for the regional transit system?
- Have you reached agreement on the level of funding needed to support regional transit expansion?
- Now that you seen the funding presentation, does this change your view of the concepts? How?



Governance



Overview



- Governance Structures:
 - RTIA-recommended Transit Services Board
 - Georgia Department of Intermodal Transportation
 - Five County MARTA
 - MARTA Regional Oversight and MARTA Operations
 - Regional Funding and Project Management Organization
 - Regional Operating Company



Overview & Purpose

Colors used in all diagrams:

Green: Primary Board Membership

Blue: Existing Organizations

Orange: New Organization/Entity

Purple: Other organizations

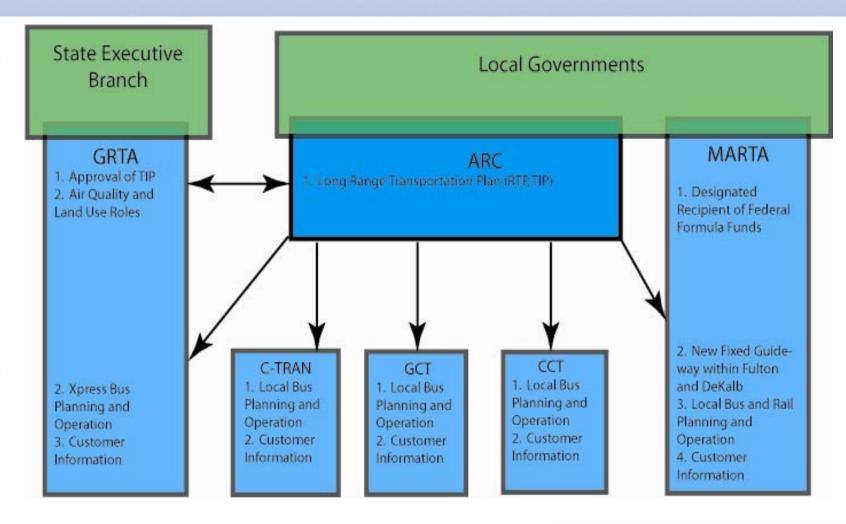
Purpose: To provide some concrete possibilities

NONE of these is a recommendation

Each is a potential direction

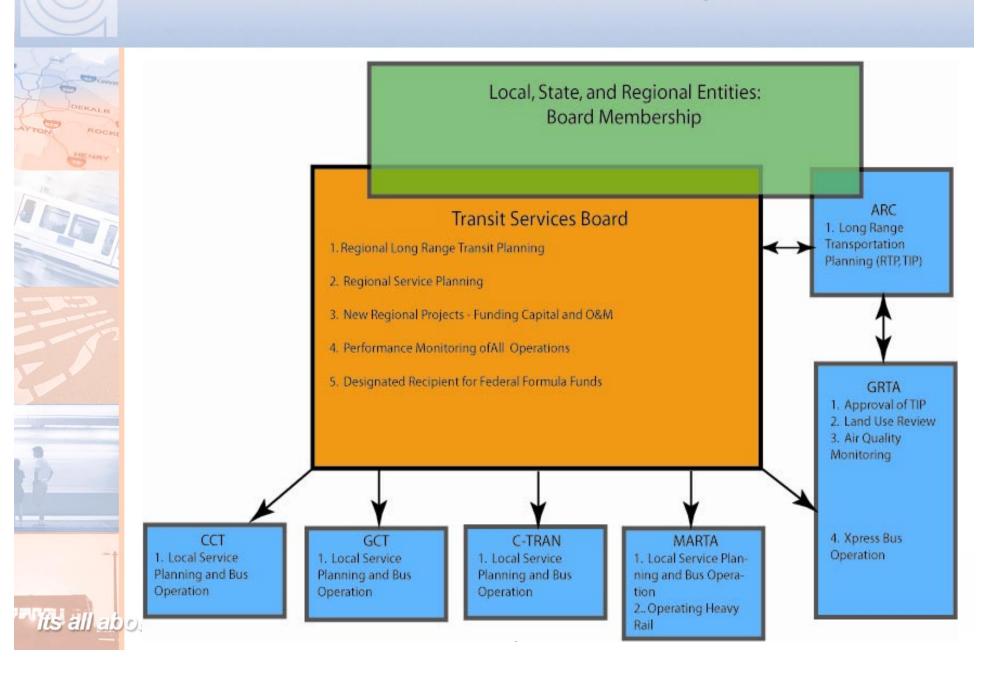


Existing Governance





RTIA-recommended Transit Services Board

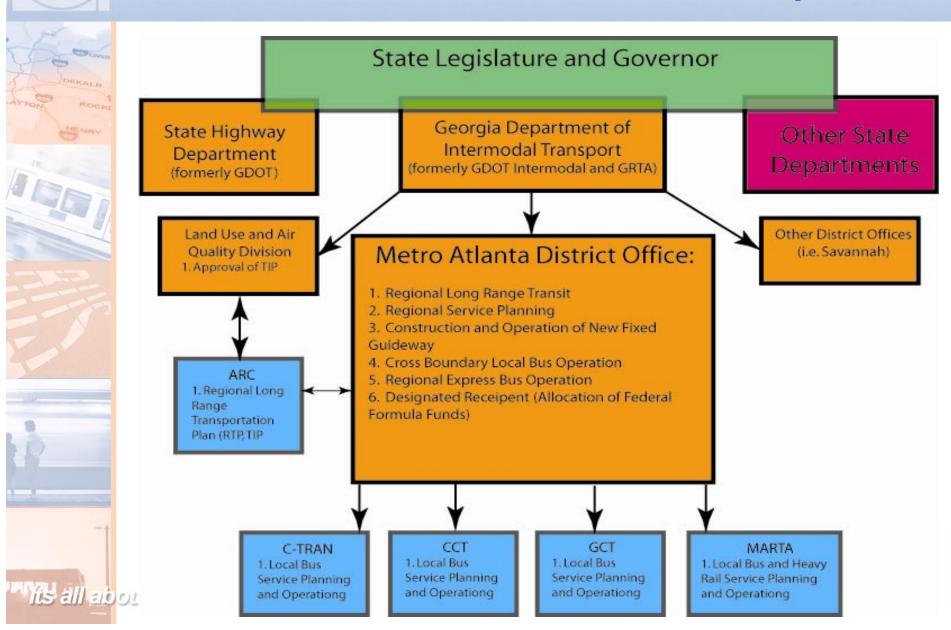




- TSB allocates funding for the region both federal recipient and any new sources
- Performs regional transit planning (cross-county) and sets performance goals for the region
- Does the TSB construct and operate new services of just construct and turn over operation to another entity or neither?
- How does TSB make sure operation of crossregional services occurs?



Georgia Department of Intermodal Transportation





- GRTA and GDOT intermodal merged into new department – Georgia Department of Intermodal Transportation
- Statewide intermodal program run by GDIT
- Metro-planning done by metro-district office
- GRTA's air quality non-attainment and land use functions housed within GDIT
- Does district office construct and operate regional transit services?
- What is the relationship with existing operators?



Five County MARTA

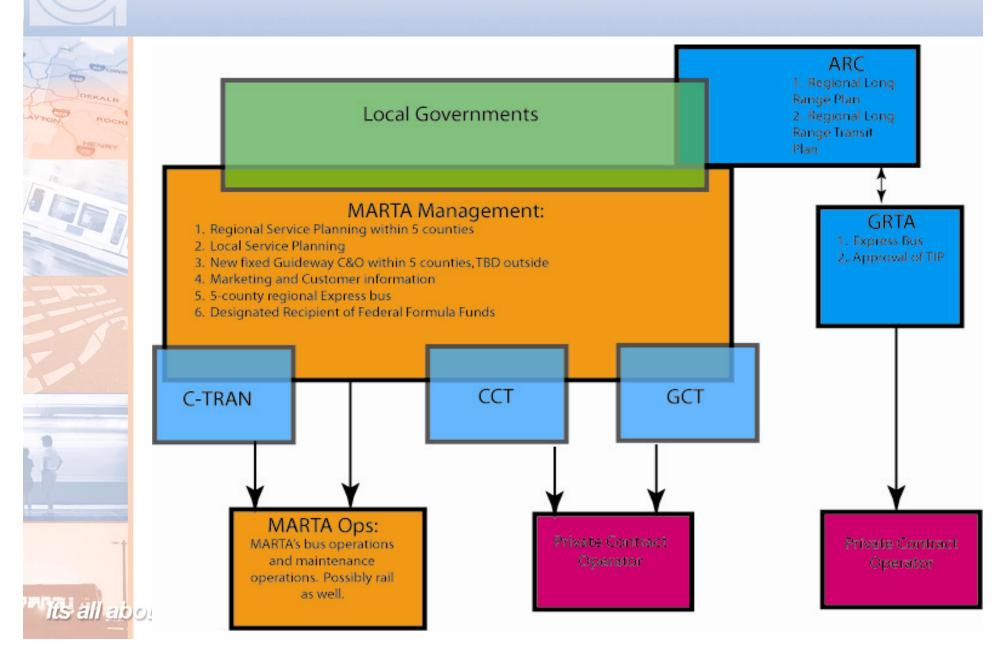
16 member MARTA Board with representatives from City of Atlanta, Clayton, Cobb, DeKalb, Fulton, and Gwinnett and designated State Reps ARC MARTA 1. Regional Long Range Transportation Planning Regional Service Planning within 5-counties, TBD outside of service area (RTP, TIP) 2. Local Service Planning with 5-counties, TBD outside of service area 3. Construction and Operation of new fixed guideway within 5-counties, TBD outside of service area 4. Marketing and Customer Information within 5-counties, TBD outside of service area 5. Regional Bus operations within 5-counties, TBD outside of service area 6. Designated Receipient - Federal Funding Allocation GRTA: 1. Xpress operation 2. Approval of TIP 3. Current Land Use and Air. C-TRAN **GCT** CCT **Quality Activities** its all abo

Five County MARTA Issues

- What steps are necessary to allow Clayton, Cobb, and/or Gwinnett to hold a referendum?
- New referendum system required
- What changes will be required to the MARTA governing structure?
- What happens for services outside of the five-county area?
- Do CCT, GCT, and C-TRAN retain identities as subsidiary of MARTA for local, in-county services?



MARTA Management and MARTA Operations

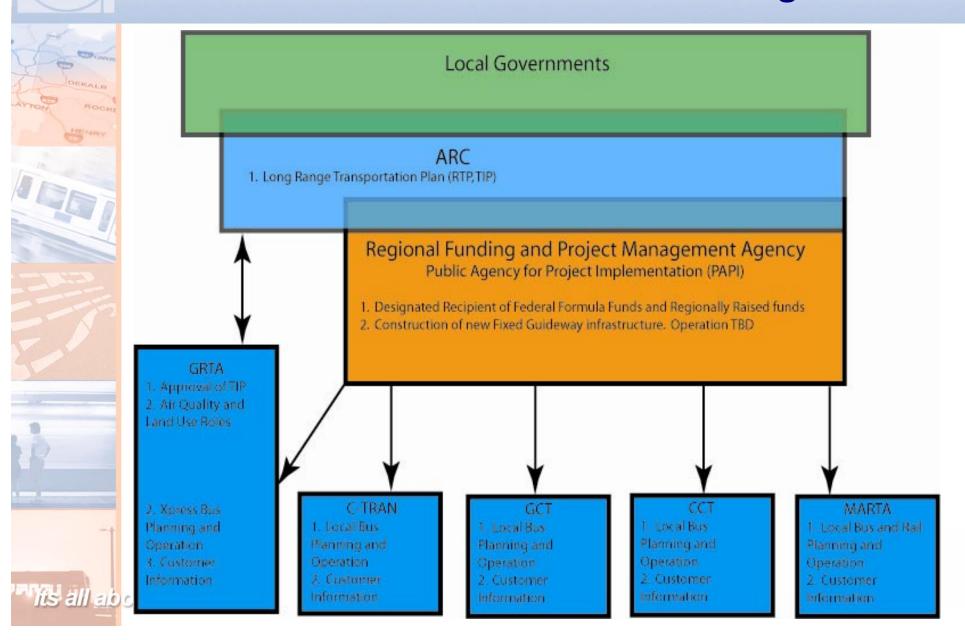




- MARTA is divided into a management and an operating company
- MARTA management retains ownership of infrastructure, plans and contracts services, performs NTD federal designated recipient
- MARTA operations division becomes an operating company similar to Veolia or First Transit. Probably renamed and bids on work outside of Atlanta
- Relationship between the two new entities becomes similar to CCT with Veolia
- Who constructs and operates new services outside of the five-county area?



Regional Funding and Project Management Organization

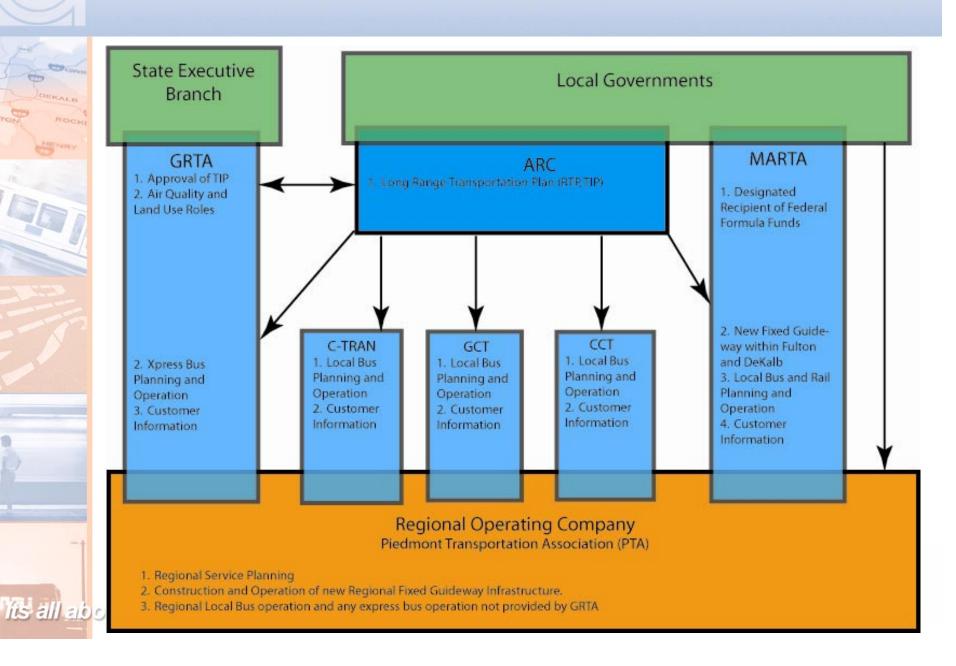




- Regional implementation agency created to implement projects, both transit and non-transit
- Administers and distributes new funding source and becomes designated recipient
- Who owns and operates the infrastructure once it is constructed?
- Who operates any new local cross-county services?



Regional Operating Company





- Possible to form without new funding sources
- Not all existing operators would have to join
- Focused exclusively on cross-county service provision and operation, including new infrastructure if funding is available
- Would any new funding be directed towards agency?
- For new services, is this one company with different divisions or separate companies?



Recap of the day

